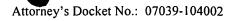
Attorney's Docket No.: 07039-104002 Applicant: Jens Ponikau Serial No.: 09/500,115 : February 8, 2000 Filed Page 2 (Once Amended) The method of claim 121, wherein said non-invasive fungus-induced 132. rhinosinusitis is accompanied by the presence of allergic mucus. (Once Amended) The method of claim 121, wherein said non-invasive fungus-induced 133. rhinosinusitis is accompanied by eosinophilia. (Once Amended) The method of claim 122, wherein said non-invasive fungus-induced rhinosinusitis is accompanied by the presence of a polyp. (Once Amended) The method of claim 122, wherein said non-invasive fungus-induced rhinosinusitis is accompanied by the presence of allergic mucus. (Once Amended) The method of claim 122, wherein said non-invasive fungus-induced rhinosinusitis is accompanied by eosinophilia. (Once Amended) The method of claim 124, wherein said non-invasive fungus-induced 139. rhinosinusitis is accompanied by the presence of a polyp. (Once Amended) The method of claim 124, wherein said non-invasive fungus-induced 140. rhinosinusitis is accompanied by the presence of allergic mucus. (Once Amended) The method of claim \24, wherein said non-invasive fungus-induced 141. rhinosinusitis is accompanied by eosinophilia.--Please add new claims 143-365 as follows: 5-143. The method of claim 70, wherein said mucoadministration begins during a period

noncoincident with an intraoperative period, said intraoperative period being the time during a

nasal surgery.



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The method of claim 143, wherein said mammal had a nasal surgery before said mucoadministration.

145. The method of claim 143, wherein said mammal was nasal surgery-free before said mucoadministration.

- 146. The method of claim 121, wherein said mammal is a human.
- 147. The method of claim 121, wherein said mammal is nonatopic.
- 148. The method of claim 121, wherein said mammal is immunocompetent.
- 149. The method of claim 121, wherein said mucoadministration comprises direct mucoadministration.
- 150. The method of claim 121, wherein said method comprises mucoadministering said formulation to at least a portion of the nasad paranasal anatomy of said mammal.
- 151. The method of claim 121, wherein said method comprises mucoadministering said formulation to at least a portion of the airways of said mammal.
- 152. The method of claim 121, wherein said method comprises mucoadministering said formulation to at least a portion of the lung airways of said mammal.
- 153. The method of claim 121, wherein said formulation is in a solid form.
- 154. The method of claim 121, wherein said formulation is in a liquid form.
- 155. The method of claim 121, wherein said formulation is in an aerosol form.

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156. The method of claim 121, wherein said formulation is in a form selected from the group consisting of a powder, crystalline substance, gel, paste, ointment, salve, cream, solution, suspension, partial liquid, spray, nebulae, mist, atomized vapor, aerosol, and tincture.

- 157. The method of claim 121, wherein said mucoadministration comprises irrigating at least a portion of the nasal-paranasal anatomy of said mammal with a liquid form of said formulation.
- 158. The method of claim 121, wherein said mucoadministration comprises applying an aerosol form of said formulation to at least a portion of the nasal-paranasal anatomy of said mammal.
- 159. The method of claim 121, wherein said mucoadministration comprises applying a powder form of said formulation to at least a portion of the nasal-paranasal anatomy of said mammal.
- 160. The method of claim 121, wherein and antifungal agent comprises a macrolide.
- 161. The method of claim 121, wherein said antifungal agent comprises an azole.
- 162. The method of claim 121, wherein said antifungal agent interpolates fungal cell wall components.
- 163. The method of claim 121, wherein said antifungal agent comprises a sterol inhibitor.
- 164. The method of claim 121, wherein said antifungal agent comprises an antifungal agent selected from the group consisting of amphotericin B, ketoconazole, itraconazole, saperconazole, voriconazole, flucytosine, miconazole, fluconazole, griseofulvin, clotrimazole, econazole, terconazole, butoconazole, oxiconazole, sulconazole ciclopirox olamine, haloprogin, tolnaftate, naftifine, terbinafine hydrochloride, morpholines, nystatin, natamycin, butenafine, undecylenic acid, Whitefield's ointment, propionic acid, and caprylic acid.



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165. The method of claim 121, wherein said antifungal agent comprises an antifungal agent selected from the group consisting of amphotericin B, ketoconazole, itraconazole, saperconazole, and voriconazole.

- 166. The method of claim 121, wherein said antifungal agent comprises amphotericin B.
- 167. The method of claim 121, wherein said antifungal agent comprises itraconazole.
- 168. The method of claim 121, wherein said formulation comprises a pharmaceutically acceptable aqueous vehicle.
- 169. The method of claim 168, wherein said formulation comprises about 0.01 ng to about 1000 mg of said antifungal agent per liter.
- 170. The method of claim 168, wherein said effective amount comprises about 0.01 mL to about 1 L of said formulation per nostril of said mammal.
- 171. The method of claim 168, wherein said effective amount comprises about 5 mL to about 100 mL of said formulation per nostril of said mammal.
- 172. The method of claim 168, wherein said effective amount comprises about 20 mL of said formulation per nostril of said mammal.
- 173. The method of claim 168, wherein said formulation comprises about 1 ng to about 500 mg of said antifungal agent per liter.
- 174. The method of claim 168, wherein said formulation comprises about 100 mg of said antifungal agent per liter.

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175. The method of claim 168, wherein said formulation comprises a plurality of antifungal agents.

- 176. The method of claim 121, wherein said effective amount of said formulation comprises about 0.01 ng to about 1000 mg of said antifungal agent per kg of body weight of said mammal.
- 177. The method of claim 121, wherein said effective amount of said formulation comprises about 1 ng to about 500 mg of said antifungal agent per kg of body weight of said mammal.
- 178. The method of claim 121, wherein said effective amount of said formulation remains constant during said effective duration.
- 179. The method of claim 121, wherein said effective frequency of said mucoadministration is from about four times a day to about once every other week.
- 180. The method of claim 121, wherein said effective frequency of said mucoadministration is from about twice a day to about once a week.
- 181. The method of claim 121, wherein said effective frequency of said mucoadministration is more frequent than once a day.
- 182. The method of claim 121, wherein said effective frequency of said mucoadministration is more frequent than once a week.
- 183. The method of claim 121, wherein said effective duration is greater than about 7 days.
- 184. The method of claim 121, wherein said effective duration is greater than about 14 days.
- 185. The method of claim 121, wherein said effective duration is greater than about 30 days.



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186. The method of claim 121, wherein said effective duration is greater than about 60 days.

187. The method of claim 121, wherein said effective duration is greater than about 90 days.

188. The method of claim 121, wherein said formulation comprises a compound selected from the group consisting of pharmaceutically acceptable aqueous vehicles, pharmaceutically acceptable solid vehicles, mucolytic agents, antibacterial agents, anti-inflammatory agents, immunosuppressants, dilators, vaso-constrictors, steroids, and therapeutic compounds.

189. The method of claim 121, wherein said method comprises administering to said mammal a second formulation.

190. The method of claim 189, wherein said second formulation comprises a compound selected from the group consisting of antifungal agents, pharmaceutically acceptable aqueous vehicles, pharmaceutically acceptable solid vehicles, mucolytic agents, antibacterial agents, anti-inflammatory agents, immunosuppressants, dilators, vaso-constrictors, steroids, and therapeutic compounds.

- 191. The method of claim 121, wherein said mucoadministration begins during a period noncoincident with an intraoperative period, said intraoperative period being the time during a nasal surgery.
- 192. The method of claim 191, wherein said mammal had a nasal surgery before said mucoadministration.
- 193. The method of claim 191, wherein said mammal was nasal surgery-free before said mucoadministration.

154. The method of claim 122, wherein said mammal is a human.

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The method of claim 122, wherein said mammal is nonatopic.

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The method of claim 122, wherein said mucoadministration comprises direct mucoadministration.

The method of claim 122, wherein said method comprises mucoadministering said formulation to at least a portion of the nasal-paranasal anatomy of said mammal.

The method of claim 122, wherein said method comprises mucoadministering said formulation to at least a portion of the airways of said mammal.

200. The method of claim 122, wherein said method comprises mucoadministering said formulation to at least a portion of the lung airways of said mammal.

70 201. The method of claim 122, wherein said formulation is in a solid form.

7). The method of claim 122, wherein said formulation is in a liquid form.

72. 58 203. The method of claim 122, wherein said formulation is in an aerosol form.

204. The method of claim 122, wherein said formulation is in a form selected from the group consisting of a powder, crystalline substance, gel, paste, ointment, salve, cream, solution, suspension, partial liquid, spray, nebulae, mist, atomized vapor, aerosol, and tincture.

205. The method of claim 122, wherein said mucoadministration comprises irrigating at least a portion of the nasal-paranasal anatomy of said mammal with a liquid form of said formulation.

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206. The method of claim 1/22, wherein said mucoadministration comprises applying an aerosol form of said formulation to at least a portion of the nasal-paranasal anatomy of said mammal.

207. The method of claim 122, wherein said mucoadministration comprises applying a powder form of said formulation to at least a portion of the nasal-paranasal anatomy of said mammal.

The method of claim 122, wherein said antifungal agent comprises a macrolide.

209. The method of claim 122, wherein said antifungal agent comprises an azole.

270. The method of claim 122, wherein said antifungal agent interpolates fungal cell wall components.

The method of claim 1/22, wherein said antifungal agent comprises a sterol inhibitor.

The method of claim 122, wherein said antifungal agent comprises an antifungal agent selected from the group consisting of amphotericin B, ketoconazole, itraconazole, saperconazole, voriconazole, flucytosine, miconazole, fluconazole, griseofulvin, clotrimazole, econazole, terconazole, butoconazole, oxiconazole, sulconazole, ciclopirox olamine, haloprogin, tolnaftate, naftifine, terbinafine hydrochloride, morpholines, nystatin, natamycin, butenafine, undecylenic acid, Whitefield's ointment, propionic acid, and caprylic acid.

The method of claim 122, wherein said antifungal agent comprises an antifungal agent selected from the group consisting of amphotericin B, ketoconazole, itraconazole, saperconazole, and voriconazole.

214. The method of claim 122, wherein said antifungal agent comprises amphotericin B.

The method of claim 122, wherein said antifungal agent comprises itraconazole.

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216. The method of claim 122, wherein said formulation comprises a pharmaceutically acceptable aqueous vehicle.

The method of claim 216, wherein said formulation comprises about 0.01 ng to about 1000 mg of said antifungal agent per liter.

The method of claim 216, wherein said effective amount comprises about 0.01 mL to about 1 L of said formulation per nostril of said mammal.

219. The method of claim 216, wherein said effective amount comprises about 5 mL to about 100 mL of said formulation per nostril of said mammal.

The method of claim 216, wherein said effective amount comprises about 20 mL of said formulation per nostril of said mammal.

70 221. The method of claim 216, wherein said formulation comprises about 1 ng to about 500 mg of said antifungal agent per liter.

The method of claim 216, wherein said formulation comprises about 100 mg of said antifungal agent per liter.

The method of claim 216, wherein said formulation comprises a plurality of antifungal agents.

The method of claim 122, wherein said effective amount of said formulation comprises about 0.01 ng to about 1000 mg of said antifungal agent per kg of body weight of said mammal.

The method of claim 122, wherein said effective amount of said formulation comprises about 1 ng to about 500 mg of said antifungal agent per kg of body weight of said mammal.

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226. The method of claim 122, wherein said effective amount of said formulation remains constant during said effective duration.

The method of claim 122, wherein said effective frequency of said mucoadministration is from about four times a day to about once every other week.

The method of claim 122, wherein said effective frequency of said mucoadministration is from about twice a day to about once a week.

The method of claim 122, wherein said effective frequency of said mucoadministration is more frequent than once a day.

The method of claim 122, wherein said effective frequency of said mucoadministration is more frequent than once a week.

The method of claim 122, wherein said effective duration is greater than about 7 days.

232. The method of claim 122, wherein said effective duration is greater than about 14 days.

233. The method of claim 122, wherein said effective duration is greater than about 30 days.

The method of claim 122, wherein said effective duration is greater than about 60 days.

The method of claim 122, wherein said effective duration is greater than about 90 days.

The method of claim 122, wherein said formulation comprises a compound selected from the group consisting of pharmaceutically acceptable aqueous vehicles, pharmaceutically acceptable solid vehicles, mucolytic agents, antibacterial agents, anti-inflammatory agents, immunosuppressants, dilators, vaso-constrictors, steroids, and therapeutic compounds.

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237. The method of claim 122, wherein said method comprises administering to said mammal a second formulation.

238. The method of claim 237, wherein said second formulation comprises a compound selected from the group consisting of antifungal agents, pharmaceutically acceptable aqueous vehicles, pharmaceutically acceptable solid vehicles, mucolytic agents, antibacterial agents, anti-inflammatory agents, immunosuppressants, dilators, vaso-constrictors, steroids, and therapeutic compounds.

The method of claim 122, wherein said mucoadministration begins during a period noncoincident with an intraoperative period, said intraoperative period being the time during a nasal surgery.

The method of claim 239, wherein said mammal had a nasal surgery before said mucoadministration.

241. The method of claim 239, wherein said mammal was nasal surgery-free before said mucoadministration.

242. The method of claim 122, said method comprising, after said mucoadministration, prophylactically mucoadministering to said mammal a prophylactic formulation in an amount, at a frequency, and for a duration effective to prevent said asthma or said non-invasive fungus-induced rhinosinusitis, said prophylactic formulation comprising an antifungal agent.

The method of claim 242, wherein said prophylactic mucoadministration comprises direct mucoadministration.

244. The method of claim 124, wherein said mammal is a human.

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- 245. The method of claim 124, wherein said mammal is nonatopic.
- 246. The method of claim 124, wherein said mammal is immunocompetent.
- 247. The method of claim 124, wherein said mucoadministration comprises direct mucoadministration.
- 248. The method of claim 124, wherein said method comprises mucoadministering said formulation to at least a portion of the nasal-paranasal anatomy of said mammal.
- 249. The method of claim 124, wherein said method comprises mucoadministering said formulation to at least a portion of the airways of said mammal.
- 250. The method of claim 124, wherein said method comprises mucoadministering said formulation to at least a portion of the lung airways of said mammal.
- 251. The method of claim 124, wherein said formulation is in a solid form.
- 252. The method of claim 124, wherein said formulation is in a liquid form.
- 253. The method of claim 124, wherein said formulation is in an aerosol form.
- 254. The method of claim 124, wherein said formulation is in a form selected from the group consisting of a powder, crystalline substance, gel, paste, ointment, salve, cream, solution, suspension, partial liquid, spray, nebulae, mist, atomized vapor, aerosol, and tincture.
- 255. The method of claim 124, wherein said mucoadministration comprises irrigating at least a portion of the nasal-paranasal anatomy of said mammal with a liquid form of said formulation.

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256. The method of claim 124, wherein said mucoadministration comprises applying an aerosol form of said formulation to at least a portion of the nasal-paranasal anatomy of said mammal.

- 257. The method of claim 124, wherein said mucoadministration comprises applying a powder form of said formulation to at least a portion of the nasal-paranasal anatomy of said mammal.
- 258. The method of claim 124, wherein said antifungal agent comprises a macrolide.
- 259. The method of claim 124, wherein said antifungal agent comprises an azole.
- 260. The method of claim 124, wherein said antifungal agent interpolates fungal cell wall components.
- 261. The method of claim 124, wherein said antifungal agent comprises a sterol inhibitor.
- 262. The method of claim 124, wherein said antifungal agent comprises an antifungal agent selected from the group consisting of amphotericin B, ketoconazole, itraconazole, saperconazole, voriconazole, flucytosine, miconazole, fluconazole, griseofulvin, clotrimazole, econazole, terconazole, butoconazole, oxiconazole, sulconazole, ciclopirox olamine, haloprogin, tolnaftate, naftifine, terbinafine hydrochloride, morpholines, nystatin, natamycin, butenafine, undecylenic acid, Whitefield's ointment, propionic acid, and carrylic acid.
- 263. The method of claim 124, wherein said antifungal agent comprises an antifungal agent selected from the group consisting of amphotericin B, ketoconazole, itraconazole, saperconazole, and voriconazole.
- 264. The method of claim 124, wherein said antifungal agent comprises amphotericin B.
- 265. The method of claim 124, wherein said antifungal agent comprises itraconazole.



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266. The method of claim 124, wherein said formulation comprises a pharmaceutically acceptable aqueous vehicle.

- 267. The method of claim 266, wherein said formulation comprises about 0.01 ng to about 1000 mg of said antifungal agent per liter.
- 268. The method of claim 266, wherein said effective amount comprises about 0.01 mL to about 1 L of said formulation per nostril of said mammal.
- 269. The method of claim 266, wherein said effective amount comprises about 5 mL to about 100 mL of said formulation per nostril of said mammal.
- 270. The method of claim 266, wherein said effective amount comprises about 20 mL of said formulation per nostril of said mammal.
- 271. The method of claim 266, wherein said formulation comprises about 1 ng to about 500 mg of said antifungal agent per liter.
- 272. The method of claim 266, wherein said formulation comprises about 100 mg of said antifungal agent per liter.
- 273. The method of claim 266, wherein said formulation comprises a plurality of antifungal agents.
- 274. The method of claim 124, wherein said effective amount of said formulation comprises about 0.01 ng to about 1000 mg of said antifungal agent per kg of body weight of said mammal.
- 275. The method of claim 124, wherein said effective amount of said formulation comprises about 1 ng to about 500 mg of said antifungal agent per kg of body weight of said mammal.

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276. The method of claim 124, wherein said effective amount of said formulation remains constant during said effective duration.

- 277. The method of claim 124, wherein said effective frequency of said mucoadministration is from about four times a day to about once every other week.
- 278. The method of claim 124, wherein said effective frequency of said mucoadministration is from about twice a day to about once a week.
- 279. The method of claim 124, wherein said effective frequency of said mucoadministration is more frequent than once a day.
- 280. The method of claim 124, wherein said effective frequency of said mucoadministration is more frequent than once a week.
- 281. The method of claim 124, wherein said effective duration is greater than about 7 days.
- 282. The method of claim 124, wherein said effective duration is greater than about 14 days.
- 283. The method of claim 124, wherein said effective duration is greater than about 30 days.
- 284. The method of claim 124, wherein said effective duration is greater than about 60 days.
- 285. The method of claim 124, wherein said effective duration is greater than about 90 days.
- 286. The method of claim 124, wherein said formulation comprises a compound selected from the group consisting of pharmaceutically acceptable aqueous vehicles, pharmaceutically acceptable solid vehicles, mucolytic agents, anti-inflammatory agents, immunosuppressants, dilators, vaso-constrictors, steroids, and therapeutic compounds.

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287. The method of claim 124, wherein said method comprises administering to said mammal a second formulation.

- 288. The method of claim 287, wherein said second formulation comprises a compound selected from the group consisting of antifungal agents, pharmaceutically acceptable aqueous vehicles, pharmaceutically acceptable solid vehicles, mucolytic agents, antibacterial agents, anti-inflammatory agents, immunosuppressants, dilators, vaso-constrictors, steroids, and therapeutic compounds.
- 289. The method of claim 124, wherein said mucoadministration begins during a period noncoincident with an intraoperative period, said intraoperative period being the time during a nasal surgery.
- 290. The method of claim 289, wherein said mammal had a nasal surgery before said mucoadministration.
- 291. The method of claim 289, wherein said mammal was nasal surgery-free before said mucoadministration.
- 292. The article of manufacture of claim 125, wherein said mammal is a human.
- 293. The article of manufacture of claim 125, wherein said mucoadministration comprises direct mucoadministration.
- 294. The article of manufacture of claim 125, wherein said label or package insert comprises an indication that said formulation can be mucoadministered to at least a portion of the nasal-paranasal anatomy of said mammal.



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295. The article of manufacture of claim \$25\$, wherein said label or package insert comprises an indication that said formulation can be mucoadministered to at least a portion of the airways of said mammal.

- 296. The article of manufacture of claim 125, wherein said label or package insert comprises an indication that said formulation can be mucoadministered to at least a portion of the lung airways of said mammal.
- 297. The article of manufacture of claim 125, wherein said formulation is in a solid form.
- 298. The article of manufacture of claim 125, wherein said formulation is in a liquid form.
- 299. The article of manufacture of claim 125, wherein said formulation is in an aerosol form.
- 300. The article of manufacture of claim 125, wherein said formulation is in a form selected from the group consisting of a powder, crystalline substance, gel, paste, ointment, salve, cream, solution, suspension, partial liquid, spray, nebulae, mist, atomized vapor, aerosol, and tincture.
- 301. The article of manufacture of claim 125, wherein said antifungal agent comprises a macrolide.
- 302. The article of manufacture of claim 125, wherein said antifungal agent comprises an azole.
- 303. The article of manufacture of claim 125, wherein said antifungal agent interpolates fungal cell wall components.
- 304. The article of manufacture of claim 125, wherein said antifungal agent comprises a sterol inhibitor.



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305. The article of manufacture of claim 125, wherein said antifungal agent comprises an antifungal agent selected from the group consisting of amphotericin B, ketoconazole, itraconazole, saperconazole, voriconazole, flucytosine, miconazole, fluconazole, griseofulvin, clotrimazole, econazole, terconazole, butoconazole, oxiconazole, sulconazole, ciclopirox olamine, haloprogin, tolnaftate, naftifine, terbinafine hydrochloride, morpholines, nystatin, natamycin, butenafine, undecylenic acid, Whitefield's ointment, propionic acid, and caprylic acid.

- 306. The article of manufacture of claim 125, wherein said antifungal agent comprises an antifungal agent selected from the group consisting of amphotericin B, ketoconazole, itraconazole, saperconazole, and voriconazole.
- 307. The article of manufacture of claim 125, wherein said antifungal agent comprises amphotericin B.
- 308. The article of manufacture of claim 125, wherein said antifungal agent comprises itraconazole.
- 309. The article of manufacture of claim 125, wherein said formulation comprises a pharmaceutically acceptable aqueous vehicle.
- 310. The article of manufacture of claim 309, wherein said formulation comprises about 0.01 ng to about 1000 mg of said antifungal agent per liter.
- 311. The article of manufacture of claim 309, wherein said effective amount comprises about 0.01 mL to about 1 L of said formulation per nostril of said mammal.
- 312. The article of manufacture of claim 309, wherein said effective amount comprises about 5 mL to about 100 mL of said formulation per nostril of said mammal.

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313. The article of manufacture of claim 309, wherein said effective amount comprises about 20 mL of said formulation per nostril of said mammal.

- 314. The article of manufacture of claim 300, wherein said formulation comprises about 1 ng to about 500 mg of said antifungal agent per lifer.
- 315. The article of manufacture of claim 309 wherein said formulation comprises about 100 mg of said antifungal agent per liter.
- 316. The article of manufacture of claim 309, wherein said formulation comprises a plurality of antifungal agents.
- 317. The article of manufacture of claim 125, wherein said effective amount of said formulation comprises about 0.01 ng to about 1000 mg of said antifungal agent per kg of body weight of said mammal.
- 318. The article of manufacture of claim 125, wherein said effective amount of said formulation comprises about 1 ng to about 500 mg of said antifungal agent per kg of body weight of said mammal.
- 319. The article of manufacture of claim 125, wherein said effective frequency of said mucoadministration is from about four times a day to about once every other week.
- 320. The article of manufacture of claim 125, wherein said effective frequency of said mucoadministration is from about twice a day to about once a week.
- 321. The article of manufacture of claim 125, wherein said effective frequency of said mucoadministration is more frequent than once a day.

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322. The article of manufacture of claim 125, wherein said effective frequency of said mucoadministration is more frequent than once a week.

- 323. The article of manufacture of claim 125, wherein said effective duration is greater than about 7 days.
- 324. The article of manufacture of claim 125, wherein said effective duration is greater than about 14 days.
- 325. The article of manufacture of claim 125, wherein said effective duration is greater than about 30 days.
- 326. The article of manufacture of claim 125, wherein said effective duration is greater than about 60 days.
- 327. The article of manufacture of claim 125, wherein said effective duration is greater than about 90 days.
- 328. The article of manufacture of claim 125, wherein said formulation comprises a compound selected from the group consisting of pharmaceutically acceptable aqueous vehicles, pharmaceutically acceptable solid vehicles, mucolytic agents, antibacterial agents, anti-inflammatory agents, immunosuppressants, dilators, vaso-constrictors, steroids, and therapeutic compounds.
- 329. The article of manufacture of claim 126, wherein said mammal is a human.
- 330. The article of manufacture of claim 126, wherein said mucoadministration comprises direct mucoadministration.





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331. The article of manufacture of claim 126, wherein said label or package insert comprises an indication that said formulation can be mucoadministered to at least a portion of the nasal-paranasal anatomy of said mammal.

- 332. The article of manufacture of claim 126, wherein said label or package insert comprises an indication that said formulation can be mucoadministered to at least a portion of the airways of said mammal.
- 333. The article of manufacture of claim 126, wherein said label or package insert comprises an indication that said formulation can be mucoadministered to at least a portion of the lung airways of said mammal.
- 334. The article of manufacture of claim 126, wherein said formulation is in a solid form.
- 335. The article of manufacture of claim 126, wherein said formulation is in a liquid form.
- 336. The article of manufacture of claim 126, wherein said formulation is in an aerosol form.
- 337. The article of manufacture of claim 126, wherein said formulation is in a form selected from the group consisting of a powder, crystalline substance, gel, paste, ointment, salve, cream, solution, suspension, partial liquid, spray, nebulae, mist, atomized vapor, aerosol, and tincture.
- 338. The article of manufacture of claim 126, wherein said antifungal agent comprises a macrolide.
- 339. The article of manufacture of claim 126, wherein said antifungal agent comprises an azole.
- 340. The article of manufacture of claim 126, wherein said antifungal agent interpolates fungal cell wall components.



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The article of manufacture of claim 126, wherein said antifungal agent comprises a sterol 341. inhibitor.

- The article of manufacture of claim 126, wherein said antifungal agent comprises an 342. antifungal agent selected from the group consisting of amphotericin B, ketoconazole, itraconazole, saperconazole, voriconazole, flucytosine, miconazole, fluconazole, griseofulvin, clotrimazole, econazole, terconazole, butoconazole, oxiconazole, sulconazole, ciclopirox olamine, haloprogin, tolnaftate, naftifine, terbinafine hydrochloride, morpholines, nystatin, natamycin, butenafine, undecylenic acid, Whitefield's ointment, propionic acid, and caprylic acid.
- The article of manufacture of claim 126, wherein said antifungal agent comprises an 343. antifungal agent selected from the group consisting of amphotericin B, ketoconazole, itraconazole, saperconazole, and voriconazole.
- The article of manufacture of claim 126, wherein said antifungal agent comprises 344. amphotericin B.
- The article of manufacture of claim 126, wherein said antifungal agent comprises 345. itraconazole.
- The article of manufacture of claim 126, wherein said formulation comprises a 346. pharmaceutically acceptable aqueous vehicle.
- The article of manufacture of claim 346, wherein said formulation comprises about 0.01 347. ng to about 1000 mg of said antifungal agent per liter.
- The article of manufacture of claim 346, wherein said effective amount comprises about 348. 0.01 mL to about 1 L of said formulation per nostril of said mammal.



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349. The article of manufacture of claim 346, wherein said effective amount comprises about 5 mL to about 100 mL of said formulation per nostril of said mammal.

- 350. The article of manufacture of claim 346, wherein said effective amount comprises about 20 mL of said formulation per nostril of said mammal.
- 351. The article of manufacture of claim 346 wherein said formulation comprises about 1 ng to about 500 mg of said antifungal agent per liter.
- 352. The article of manufacture of claim 346, wherein said formulation comprises about 100 mg of said antifungal agent per liter.
- 353. The article of manufacture of claim 346, wherein said formulation comprises a plurality of antifungal agents.
- 354. The article of manufacture of claim 126, wherein said effective amount of said formulation comprises about 0.01 ng to about 1000 mg of said antifungal agent per kg of body weight of said mammal.
- 355. The article of manufacture of claim 126, wherein said effective amount of said formulation comprises about 1 ng to about 500 mg of said antifungal agent per kg of body weight of said mammal.
- 356. The article of manufacture of claim 126, wherein said effective frequency of said mucoadministration is from about four times a day to about once every other week.
- 357. The article of manufacture of claim 126, wherein said effective frequency of said mucoadministration is from about twice a day to about once a week.





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358. The article of manufacture of claim 26, wherein said effective frequency of said mucoadministration is more frequent than once a day.

- 359. The article of manufacture of claim 126, wherein said effective frequency of said mucoadministration is more frequent than once a week.
- 360. The article of manufacture of claim 126, wherein said effective duration is greater than about 7 days.
- 361. The article of manufacture of claim 126, wherein said effective duration is greater than about 14 days.
- 362. The article of manufacture of claim 125 wherein said effective duration is greater than about 30 days.
- 363. The article of manufacture of claim 126, wherein said effective duration is greater than about 60 days.
- 364. The article of manufacture of claim 126, wherein said effective duration is greater than about 90 days.
- 365. The article of manufacture of claim 126, wherein said formulation comprises a compound selected from the group consisting of pharmaceutically acceptable aqueous vehicles, pharmaceutically acceptable solid vehicles, mucolytic agents, antibacterial agents, anti-inflammatory agents, immunosuppressants, dilators, vaso-constrictors, steroids, and therapeutic compounds.

